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		Application Number	10/782,098
		Filing Date	February 19, 2004
		First Named Inventor	Carmen Flosbach
		Group Art Unit	1796
		Examiner Name	Rabon A. Sergent
Total Number of Pages in This Submission		Attorney Docket Number	FA1224 US NA

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Application No.: 10/782,098

Filing Date: February 19, 2004

First Named Inventor: Carmen Flosbach

Title: Process for the Production of Polyurethane Di(Meth)Acrylates

Attorney Docket: FA1224 US NA

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF:  
**CARMEN FLOSBACH, ET AL.**

APPLICATION NO.:  
**10/782,098**

FILED:  
**FEBRUARY 19, 2004**

FOR:  
**PROCESS FOR PRODUCTION OF  
POLYURETHANE DI(METH)ACRYLATES**

GROUP ART UNIT:  
**1796**

EXAMINER:  
**RABON A. SERGENT**

ATTORNEY DOCKET NO.:  
**FA1224 US NA**

REPLY BRIEF

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Sir:

Pursuant to 37 C.F.R. § 41.41, the following is a reply brief, filed in triplicate, in reply to the Examiner's Answer mailed on May 14, 2008.

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**I. STATUS OF THE CLAIMS**

Appellants canceled Claims 2-3, 5-6, and 8-9. Claims 1, 4, 7, and 10 remain in the case. The Examiner rejected Claims 1, 4, 7, and 10 under 35 U.S.C. § 103(a) and are the subject of this Appeal. No claims have been allowed.

**II. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

Whether claims 1, 4, 7 and 10 are obvious under 35 U.S.C. § 103(a) over WO 01/25359 (US 6,825,241) equivalent to US 6,825,241 to Blum, *et al.* (*hereinafter, "Blum"*).

**III. ARGUMENT**

In the Examiner's Answer, the rejection of Claims 1, 4, 7 and 10 was maintained as being obvious under 35 U.S.C. § 103(a) over Blum. According to the Examiner, Blum discloses polyurethane diacrylates and powder coatings derived from polyurethane diacrylates, wherein the polyurethane diacrylates are produced from the reaction of hexane diisocyanate with ethylene glycol, butanediol, and hydroxyethyl acrylate in a molar ratio that meets the claimed ratios, specifically a molar ratio that corresponds to appellants' ratio where the "X" variable equals 2.5.

In the declarations submitted, comparisons of Appellants' Examples to that of Blum showed superior and unexpected results. Appellants prepared Examples where X values were at 2, 3 and 4 which all gave superior results to Blum having an X value of 2.5. However, the Examiner suggests that Appellants have not demonstrated superiority for X = 2.5. Appellants respectfully submit that such showing is unnecessary. Appellants suggest viewing the data in terms of molar percentage of hexane diisocyanate ("HDI") instead of the X value because the X value is simply a derivative of the HDI mole percentage. This exercise shows the closeness of the data points, that is, X = 2, 2.5, 3, and 4 as a result of the showing in the original HDI mole percent terms.

The relationship of the X values of hexane diisocyanate in mole percent are as follows:

- X value at 2 is equivalent to HDI mole percent at 40%**
- X value at 2.5 is equivalent to HDI mole percent 41.6%**
- X value at 3 is equivalent to HDI mole percent 42.8%**
- X value at 4 is equivalent to HDI mole percent 44.4%**

Thus, in terms of the HDI mole percent, it is clear that the data points are proximate to each other and the artificial broadening of the range when expressed in X terms disappears. Table 1 below compares typical results of the acid resistance testing set forth in the first declaration of Appellant's invention in comparison to Blum.

TABLE 1

X value of HDI	Mole % of HDI	Examples	Acid Resistance
X = 2	40.0%	Invention Ex. 1	12
X = 2.5	41.6%	Blum	9 Failed
X = 3	4.28%	Invention Ex. 2, 3, 5, 6	11- 23
X = 4	44.4%	Invention Ex. 4	12

Clearly Appellants have shown in the declaration that compositions with X values of 2, 3, and 4 provide superior acid resistance results in comparison to the Example of Blum.

In fact, when expressed in HDI mole percent, the difference in molar percent between X = 2 and X = 2.5 is merely 1.6% and between X = 3 and X = 2.5, only 1.2%. With such proximity of the HDI mole percent data point at 41.6% to values of X = 2 and X = 3, that is, a mere 1.6% mole percent separation from the data point on its left side, and a mere 1.2% separation from the data point on its right side, there can not be any doubt that superior results over Blum would be achieved at the X = 2.5 level. If the end results for X = 2.5 were to differ, if at all, it would be only by an insignificant amount to those at X = 2 and 3. Clearly, Appellants have demonstrated a scope that is commensurate to that of the claim. In such a situation, the burden shifts to the Examiner to at least provide some facts or data that are contrary to the information provided herein and not simply reject the clear data presented that show superior results to the cited prior art by assuming an arbitrary position that X at 2.5 was not illustrated in the declaration.

Appellants further submit that MPEP 716.02(e) states that "[a]n affidavit or declaration under 37 CFR [§] 1.132 must compare the claimed subject matter with the closest prior art to be effective to rebut a *prima facie* case of obviousness. *In re*

*Burckel*, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979). . . . [However, w]here the comparison is not identical with the reference disclosure, deviations therefrom should be explained, *In re Finley*, 174 F.2d 130, 81 USPQ 383 (CCPA 1949), and if not explained should be noted and evaluated, and if significant, explanation should be required. *In re Armstrong*, 280 F.2d 132, 126 USPQ 281 (CCPA 1960) (deviations from example were inconsequential)."

Applying this legal framework to the present case, Appellants compared the claimed subject matter with the closest prior art (Blum) to rebut the Examiner's *prima facie* case of obviousness. Because according to the Examiner, the comparison was not identical (Appellants disagree, but nevertheless), Appellants determined the significance of the deviation, which, in similarity to the Armstrong case, is "inconsequential." Specifically, Appellants determined that the a difference in HDI mole percent of 1.6% between X=2 and X=2.5, and of 1.2% between X=2.5 and X=3, falls within the category of being inconsequential. Therefore, the declaration submitted by Appellants is effective to rebut the *prima facie* case of obviousness.

#### IV. CONCLUSION

For the reasons set forth above, the Board of Patent Appeals and Interferences is respectfully requested to reverse the final rejection of pending Claims 1, 4, 7, and 10, and indicate allowability of all claims.

Please charge any fee due which is not accounted for to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Respectfully Submitted,

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